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PART VI

ENVIRONMENTAL PROTECTION AGENCY

■

STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Lime Manufacturing Plants

[6560-01]

Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER C—AIR PROGRAMS

[FRL 835-2]

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Lime Manufacturing Plants

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule establishes standards of performance which limit emissions of particulate matter from new, modified, and reconstructed lime manufacturing plants. The standards implement the Clean Air Act and are based on the Administrator's determination that lime manufacturing plant emissions contribute significantly to air pollution. The intended effect of setting these standards is to require, new, modified, and reconstructed lime manufacturing plants to use the best demonstrated system of continuous emission reduction.

EFFECTIVE DATE: March 7, 1978.

ADDRESSES: A support document entitled, "Standard Support and Environmental Impact Statement, Volume II: Promulgated Standards of Performance for Lime Manufacturing Plants" (EPA-450/2-77-007b), October 1977, has been prepared and is available. This document includes summary economic and environmental impact statements as well as EPA's responses to the comments on the proposed standards. Also available is the supporting volume for the proposed standards entitled, "Standard Support and Environmental Impact Statement, Volume I: Proposed Standards of Performance for Lime Manufacturing Plants" (EPA-450/2-77-007a), April 1977. Copies of these documents can be ordered by addressing a request to the EPA Library (MD-35), Research Triangle Park, N.C. 27711. The title and number for each or both of the documents should be specified when ordering. These documents as well as copies of the comment letters responding to the proposed rulemaking published in the FEDERAL REGISTER on May 3, 1977 (42 FR 22506) are available for public inspection and copying at the U.S. Environmental Protection Agency, Public Information Reference Unit (EPA Library), Room 2922, 401 M Street SW., Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT:

Don R. Goodwin, Director, Emission Standards and Engineering Division (MD-13), Environmental Protection Agency, Research Triangle Park, N.C. 27711, telephone 919-541-5271.

SUPPLEMENTARY INFORMATION: There are two minor changes in the standards from those proposed on May 3, 1977. The first of these is the specific exclusion of lime production units at kraft pulp mills [§60.340(b)]. Emission standards for kraft pulp mills were proposed in the FEDERAL REGISTER on September 24, 1976, which cover emissions from the lime production units at these mills.

The second change is the addition of §60.344(c) (Test methods and procedures). The addition recommends a testing technique which would more accurately test exhaust gases from hydrators in those cases where high moisture content is a problem.

During the 60-day comment period following publication of the proposed emission standards in the FEDERAL REGISTER on May 3, 1977, 23 comment letters were received, 10 from industry, 7 from State or local pollution control agencies, and 6 from other government agencies. In addition, on June 16, 1977, a public meeting was held at the EPA facility at Research Triangle Park, N.C., that provided an opportunity for oral presentations and comments on the standards. None of the comments warranted a change of the emission standards nor did any comments justify any significant changes in the standards support document.

Major comments focused on three areas: (1) criticism of the testing procedures and the supporting emission data, (2) the opacity standard, and (3) the requirement for continuous monitoring. These and other comments are summarized and addressed in Volume II of the standards support document.

The most significant of the three areas of comments was the questioning of the testing procedures and the data base. More specifically, it was asserted that when data were gathered upon which to base the standard, standard testing procedures were not followed in every case, which consequently biased the data. A careful review of the procedures and the resulting data revealed that, although there were minor miscalculations, the errors did not affect the emission standards that were set.

The opacity standard (10 percent), was questioned because it was thought to be too stringent and in a range where observer error would result in unfair violation decisions. A review of the opacity data indicated that of the 1,056 six-minute averages of opacity, less than one percent exceeded the visible emission level of 10 percent, thus EPA considers the 10 percent opacity standard reasonable. As for observer error, as indicated in the introduction to Reference Method 9 (Part 60, Appendix A), the accuracy of the method and any potential error must be taken into account when determining possible violations of the standards.

Some commenters questioned the requirement for continuous monitoring of multiple stack baghouses, believing it to be unnecessary and excessively expensive to place a monitor on each stack. In establishing the continuous monitoring requirement, it was not the intention of EPA that emission monitors be installed at each stack at a multiple stack baghouse. The proposed regulation has been revised to reflect this intent. It is believed that in most cases one monitor, or two in certain situations, can be installed to simultaneously monitor emissions from several stacks. With such a monitoring system, the plant must demonstrate that representative emissions are monitored on a continuous basis.

It should be noted that standards of performance for new sources established under section 111 of the Clean Air Act reflect the degree of emission limitation achievable through application of the best adequately demonstrated technological system of continuous emission reduction (taking into consideration the cost of achieving such emission reduction, any nonair quality health and environmental impact and energy requirements). State implementation plans (SIPs) approved or promulgated under section 110 of the Act, on the other hand, must provide for the attainment and maintenance of national ambient air quality standards (NAAQS) designed to protect public health and welfare. For that purpose, SIPs must in some cases require greater emission reductions than those required by standards of performance for new sources. Section 173 of the Act requires, among other things, that a new or modified source constructed in an area which exceeds the NAAQS must reduce emissions to the level which reflects the "lowest achievable emission rate" for such category of source. In no event can the emission rate exceed any applicable standard of performance.

A similar situation may arise when a major emitting facility is to be constructed in a geographic area which falls under the prevention of significant deterioration of air quality provisions of the Act (part C). These provisions require, among other things, that major emitting facilities to be constructed in such areas are to be subject to best available control technology for all pollutants regulated under the Act. The term "best available control technology" (BACT), as defined in section 169(3), means "an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act emitted from or which results

from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of 'best available control technology' result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section 111 or 112 of this Act."

Standards of performance should not be viewed as the ultimate in achievable emission control and should not preclude the imposition of a more stringent emission standard, where appropriate. For example while cost of achievement may be an important factor in determining standards of performance applicable to all areas of the country (clean as well as dirty), statutorily, costs do not play such a role in determining the "lowest achievable emission rate" for new or modified sources locating in areas violating statutorily-mandated health and welfare standards. Although there may be emission control technology available that can reduce emissions below those levels required to comply with standards of performance, this technology might not be selected as the basis of standards of performance due to costs associated with its use. This in no way should preclude its use in situations where cost is a lesser consideration, such as determination of the "lowest achievable emission rate."

In addition, States are free under section 116 of the Act to establish even more stringent emission limits than those established under section 111 or those necessary to attain or maintain the NAAQS under section 110. Thus, new sources may in some cases be subject to limitations more stringent than EPA's standards of performance under section 111, and prospective owners and operators of new sources should be aware of this possibility in planning for such facilities.

MISCELLANEOUS: The effective date of this regulation is March 7, 1978. Section 111(b)(1)(B) of the Clean Air Act provides that standards of performance or revisions of them become effective upon promulgation and apply to affected facilities, construction or modification of which was commenced after the date of proposal (May 3, 1977).

NOTE.—The Environmental Protection Agency has determined that this document does not contain a major proposal requiring an Economic Impact Analysis under Executive Orders 11821 and 11949 and OMB Circular A-107.

Dated: March 1, 1978.

DOUGLAS M. COSTLE,
Administrator.

Part 60 of Chapter I of Title 40 of the Code of Regulations is amended as follows:

1. By adding subpart HH as follows:

Subpart HH—Standards of Performance for Lime Manufacturing Plants

Sec.

60.340 Applicability and designation of affected facility.
60.341 Definitions.
60.342 Standard for particulate matter.
60.343 Monitoring of emissions and operations.
60.344 Test methods and procedures.

AUTHORITY: Sec. 111 and 301(a) of the Clean Air Act, as amended (42 U.S.C. 7411, 7601), and additional authority as noted below.

§ 60.340 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities used in the manufacture of lime: rotary lime kilns and lime hydrators.

(b) The provisions of this subpart are not applicable to facilities used in the manufacture of lime at kraft pulp mills.

(c) Any facility under paragraph (a) of this section that commences construction or modification after May 3, 1977, is subject to the requirements of this part.

§ 60.341 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in subpart A of this part.

(a) "Lime manufacturing plant" includes any plant which produces a lime product from limestone by calcination. Hydration of the lime product is also considered to be part of the source.

(b) "Lime product" means the product of the calcination process including, but not limited to, calcitic lime, dolomitic lime, and dead-burned dolomite.

(c) "Rotary lime kiln" means a unit with an inclined rotating drum which is used to produce a lime product from limestone by calcination.

(d) "Lime hydrator" means a unit used to produce hydrated lime product.

§ 60.342 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any rotary lime kiln any gases which:

(i) Contain particulate matter in excess of 0.15 kilogram per megagram of limestone feed (0.30 lb/ton).

(ii) Exhibit 10 percent opacity or greater.

(2) From any lime hydrator any gases which contain particulate matter in excess of 0.075 kilogram per megagram of lime feed (0.15 lb/ton).

§ 60.343 Monitoring of emissions and operations.

(a) The owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate a continuous monitoring system, except as provided in paragraph (b) of this section, to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40 percent opacity.

(b) The owner or operator of any rotary lime kiln using a wet scrubbing emission control device subject to the provisions of this subpart shall not be required to monitor the opacity of the gases discharged as required in paragraph (a) of this section, but shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be accurate within ±250 pascals (one inch of water).

(2) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control device. The monitoring device must be accurate within ±5 percent of design scrubbing liquid supply pressure.

(c) The owner or operator of any lime hydrator using a wet scrubbing emission control device subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) A monitoring device for the continuous measuring of the scrubbing liquid flow rate. The monitoring device must be accurate within ±5 percent of design scrubbing liquid flow rate.

(2) A monitoring device for the continuous measurement of the electric current, in amperes, used by the scrubber. The monitoring device must be accurate within ±10 percent over its normal operating range.

(d) For the purpose of conducting a performance test under § 60.8, the owner or operator of any lime manufacturing plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device for measuring the mass rate of limestone feed to any affected rotary lime

kiln and the mass rate of lime feed to any affected lime hydrator. The measuring device used must be accurate to within ±5 percent of the mass rate over its operating range.

(e) For the purpose of reports required under §60.7(c), periods of excess emissions that shall be reported are defined as all six-minute periods during which the average opacity of the plume from any lime kiln subject to paragraph (a) of this subpart is 10 percent or greater.

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414).)

§60.344 Test methods and procedures.

(a) Reference methods in Appendix A of this part, except as provided under §60.8(b), shall be used to determine compliance with §60.322(a) as follows:

(1) Method 5 for the measurement of particulate matter,

(2) Method 1 for sample and velocity traverses,

(3) Method 2 for velocity and volumetric flow rate,

(4) Method 3 for gas analysis,

(5) Method 4 for stack gas moisture, and

(6) Method 9 for visible emissions.

(b) For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 std m^3/h, dry basis (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Administrator.

(c) Because of the high moisture content (40 to 85 percent by volume) of the exhaust gases from hydrators, the Method 5 sample train may be modified to include a calibrated orifice immediately following the sample nozzle when testing lime hydrators. In this configuration, the sampling rate necessary for maintaining isokinetic conditions can be directly related to exhaust gas velocity without a correction for moisture content. Extra care should be exercised when cleaning the sample train with the orifice in this position following the test runs.

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414).)

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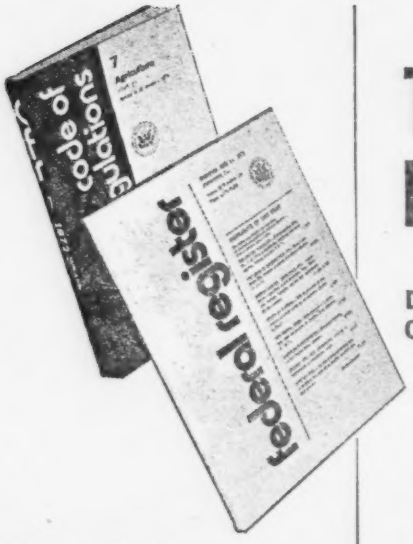

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